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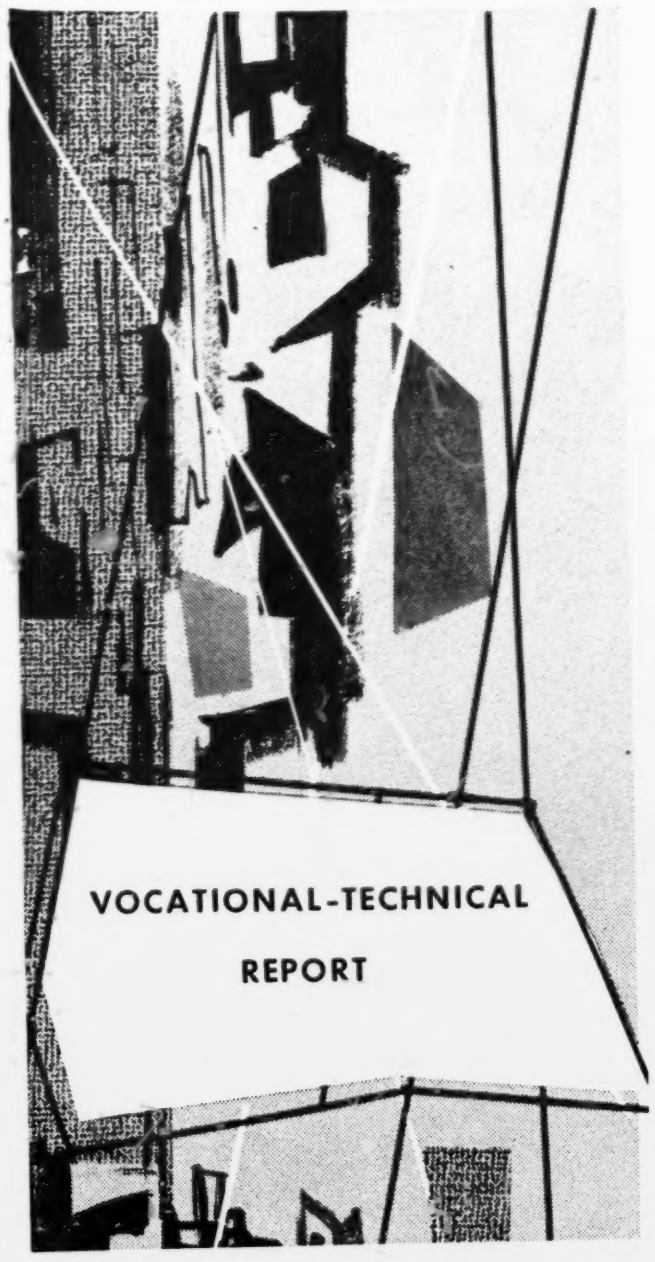
To secure data on the availability and utilization of occupational information, questionnaires were sent to all public high schools on a 1962 listing supplied by the Office of Education and to a random sample of schools later discovered not to have been included in the list. Personnel in 4,436 schools responded, including 3,983 building principals, 3,090 librarians, 2,733 trade and industrial teachers, 621 distributive education teachers, 1,182 commercial teachers, and 3,582 school counselors. It was found that, although approximately 58 percent of high school graduates enter work or a work preparatory program following high school, occupational information for this group is the poorest. Many boys and girls never seek information. There is heavy reliance on reading activities for occupational information with the "Occupational Outlook Handbook" the most frequently utilized source. Information in regard to training opportunities, job clusters, psychological characteristics of workers, and occupational outlook is inadequate. Recommendations include development of multi-media approaches to information dissemination by private publishers, major data-gathering activities by the government, establishment of state or regional information centers to which all schools would have access, use of job cluster format in presenting occupational information, and use of films or filmstrips to depict elements of work. (JK)



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A NATIONAL SCHOOL COUNSELOR EVALUATION OF OCCUPATIONAL INFORMATION

by

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CENTER FOR STUDIES IN VOCATIONAL AND TECHNICAL EDUCATION

RESEARCH REPORT

Industrial Relations Research Institute
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A NATIONAL SCHOOL COUNSELOR EVALUATION OF OCCUPATIONAL INFORMATION*

Primary among the numerous reasons for undertaking the survey described in this Report was the inability to answer rather simple questions concerning what types of occupational information exist and how the available information is used in secondary schools. Two people can be credited with asking questions which led to the initiation of this study. Miss Barbara Klees, a graduate student in Industrial Relations, provided the initial impetus when she came to the principal investigator in search of literature available on the topic. After several discussions, an open-ended questionnaire seeking answers to these general questions was prepared and was personally administered by her to five counselors in the Madison, Wisconsin, area. The responses of these counselors indicated that occupational information was viewed as a monster too big to manage and therefore largely ignored. The second line of inquiry came about in response to a question from Mr. Sol Swerdloff, then Chief, Division of Manpower and Occupational Outlook, Bureau of Labor Statistics, who asked in what way the million and a half copies of the Occupational Outlook Handbook were being used. The purpose of this study, therefore, was to conduct a comprehensive survey of occupational information literature and an evaluation of its use by secondary school personnel in order to answer the questions mentioned above and additional questions which might arise as the study progressed.

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After several possible sampling procedures were considered, it was decided to utilize a mailed questionnaire and to contact every public high school in the United States. The reason for using this approach was an inability to determine what constituted a representative sample of secondary schools. For example, a random approach could easily exclude the 20 major cities in the United States. The decision was made to route communication through school principals in an effort to increase responses from vocational instructors and librarians who, in addition to the counselors, were surveyed. The final questionnaire was the result of three pilot mailings.

Two questionnaires were selected from each state for use in establishing response categories to questions where an opinion or method was sought. The similar responses to each open-ended question were grouped into general categories. Responses which did not fit into a general category were placed in separate categories.[1]

It was discovered, after the first mailing, that the listing of secondary schools in the United States provided by the U.S. Office of Education had not been updated since 1962. After checking the 1962 list against state school directories for the current year, it was determined that the accuracy of the 1962 list ranged from 100 percent for Hawaii to 59 percent for Missouri. Approximately 82 percent of the public high schools now in existence were contained on the 1962 list. Since directories were not available for four states (Arkansas, Michigan, New York, Vermont) and the District of Columbia, letters were sent to the data

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[1]The questionnaire, code book items, follow-up letters, and tables of responses are available on request from the Center.

processing division of these states requesting a count of the number of public high schools. The over-all number of nearly 18,000 high schools remained relatively constant since 1962 due to consolidation of schools in rural areas and new schools in urban and suburban areas. Subsequently, 300 schools from the 3,500 not originally contacted because they were not on the Office of Education list were randomly selected and sent questionnaires. About 19 percent of them responded; these responses were compared with those of schools contacted originally.

It was necessary to communicate directly with the research director in each major city in order to obtain the involvement of school personnel in the large systems. This effort was quite successful, as every major city (those with populations of 500,000 or over) except one participated. The original expectation was that the Bureau of Labor Statistics, U.S. Department of Labor, would be able to interview a representative sample of nonrespondents in order to help determine the extent of response bias. However, due to unforeseen circumstances, these interviews did not materialize. Therefore, 100 of the nonrespondents were contacted in a fourth and a fifth mailing to study response bias. Only 15 of the 100 responded, suggesting that the sample picked to represent nonrespondents was all too representative. Responses from the 15 schools and responses from the 57 schools omitted from the orginal list differed from the major sample only in the following ways:

1. The 15 schools representing the nonrespondent group differed from the major sample by placing less emphasis on individual pupil contact in utilizing occupational information. The nature of the pupils served and the concerns were similar. It was only in presenting information to groups rather than individuals that the 15 representing the nonrespondents differed from the major sample.

2. The sample representing the schools omitted from the original list also differed little from the major sample. The one difference was in noting a greater incidence in individual pupil-initiated contact than was found for the major sample.

Finally, a general comment seems in order prior to discussing the results. Although the questionnaire format differentiated between outlook and description information, most counselors did not so differentiate except where the questions were designed to elicit different responses. Many respondents commented on the apparent parallel nature of the questions. An obvious conclusion, therefore, is that counselors do not differentiate between these two types of occupational literature.

Results

The results for the major sample are reported below and are seen as representative of nonresponding and noncontacted schools based on the results cited above. The question of a response bias, while not satisfactorily answered, was not considered a major limitation because of the large number of respondents and the similarities in response across regions, which will be shown later.

In 4,436 schools where principals and/or counselors responded:

1. 11 percent are K-12
   20 percent are 7-12
   4 percent are 8-12
   40 percent are 9-12
   23 percent are 10-12

2. The average enrollment is 869

3. 49 percent of the pupils are males

4. 79 percent of the pupils are Caucasian

In total, responses were obtained from personnel in 4,436 schools, including 3,983 building principals, 3,090 school librarians, 2,733

trade and industrial teachers, 621 distributive education teachers, 1,182 commercial teachers, and 3,582 school counselors.

Among graduates from high school, building principals reported:

27 percent enter employment directly
3 percent enter apprenticeship training
7 percent enter the Armed Forces
10 percent enter vocational, technical, or trade school
42 percent enter college or junior college
6 percent unknown

A composite picture of students' home backgrounds showed:

24 percent from the farm
20 percent from rural but nonfarm
21 percent suburban
27 percent city proper
4 percent inner core
2 percent other

RESPONSES PERTAINING TO OCCUPATIONAL LITERATURE:

1. Eighty percent of the literature is purchased or obtained by the counselor or director of guidance.

2. An average of $178 is available for purchasing occupational literature yearly.

3. Facilities available for displaying materials include:

12 percent bulletin boards only
8 percent section of the library
11 percent space in the counselor's office
20 percent use made of both the counselor's office and the library
12 percent use the library, counselor's office, and bulletin boards
35 percent some other combination

The responses of school librarians and vocational instructors appear in the following section. Counselor responses are presented in a later section of the Report.

WHO USES OCCUPATIONAL INFORMATION--UNDER WHAT CIRCUMSTANCES?

1. The 3,090 librarians indicated:

   a. 12th grade boys and girls make the greatest use of informational materials.

   b. 11th grade boys and girls make the least use of these materials.

   c. 44 percent of the boys and 30 percent of the girls in the high school never seek information.

2. The 2,733 trade and industrial teachers suggested that 45 percent of the boys and 87 percent of the girls in high school never seek information regarding jobs in trade and industry, agriculture, and homemaking.

3. The 621 distributive education teachers noted 75 percent of boys and 60 percent of high school girls never seek information about jobs in distributive education.

4. The 1,182 commercial teachers indicated that 70 percent of the boys and 50 percent of the high school girls never seek information about jobs in the commercial field.

OCCUPATIONAL INFORMATION SOURCES RANKED AS USED MOST FREQUENTLY BY:

1. Librarians:
   a. Occupational briefs and pamphlets (55 percent)[2]
   b. Occupational Outlook Handbook (48 percent)
   c. Books in general (38 percent)

2. Trade and industrial teachers:
   a. Textbooks dealing with subject matter (37 percent)
   b. Department of Agriculture publications (23 percent)
   c. Magazines in general (25 percent)

3. Distributive education teachers:
   a. Textbooks dealing with subject matter (40 percent)
   b. Occupational Outlook Handbook (28 percent)
   c. Briefs and pamphlets (23 percent)
   d. Magazines in general (20 percent)

4. Commercial teachers:
   a. Magazines in general (47 percent)
   b. Textbooks dealing with subject matter (27 percent)
   c. Occupational Outlook Handbook (23 percent)
   d. Briefs and pamphlets (20 percent)

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[2]Percentage of respondents citing this source.

REASONS LIBRARIANS GAVE TO EXPLAIN STUDENTS' USE OF SOURCES:

1. Accurate
2. Readable (i.e., comprehensive, brief, clear, well organized, simple)
3. Up-to-date
4. Accessible--easy to find

LIBRARIANS SUGGESTED THESE MATERIALS COULD BE IMPROVED BY:

1. More frequent revisions
2. Better and more attractive bindings, plus more volumes
3. Better index
4. More graphs and charts

USE VOCATIONAL INSTRUCTORS MADE OF INFORMATIONAL MATERIALS

1. Trade and industrial:
   a. Provide general occupational information (31 percent)
   b. Promote course goals (30 percent)
   c. Provide specific occupation information (30 percent)

2. Distributive education:
   a. Familiarize students with various occupations (generally) (49 percent)
   b. Promote course goals (16 percent)
   c. Develop understanding of business world (13 percent)
   d. Familiarize students with specific occupations (12 percent)

3. Commercial instructors:
   a. Provide general information on jobs (32 percent)
   b. Provide specific information on jobs (30 percent)
   c. Provide information on how to fill out applications (21 percent)

As reported by the school librarians, senior boys made the greatest use of information materials, and ninth or tenth grade boys made the least use of these materials. The sources these students used most frequently are the Occupational Outlook Handbook, pamphlets from private publishers, and general books giving information about various occupations. The trade and industrial teachers, distributive education teachers, and commercial teachers mentioned textbooks, periodicals, and the Dictionary of Occupational Titles as most frequently used sources in addition to those sources mentioned by the school librarians.

The vocational instructors primarily used information sources to provide general and specific occupational information and to promote course goals. The librarians indicated students use particular materials because the materials are accurate and readable.

INFORMATION DESCRIBING THE SCHOOL SETTING AND STUDENT BODY:

There were 3,582 counselors in the 4,436 schools who returned questionnaires with complete information. In schools with more than one counselor, the director was asked to select one counselor to respond. Six percent of the counselors worked in K-12 settings, 22 percent in 7-12, 4 percent in 8-12, 37 percent in 9-12, 23 percent in 10-12, 1 percent in grade 10 only, 1 percent in grade 11 only, 2 percent in grade 12 only, and 4 percent in other grade combinations.

The counselors reported 27 percent of the high school graduates enter employment directly, 3 percent enter apprenticeship programs, 8 percent enter the military, 12 percent enter vocational, technical or trade schools, 42 percent enter college or junior college, and 8 percent are unaccountable.

The counselors average 85 percent of their time in guidance and counseling activities with a range of 5 percent to full time. The respondents had been in counseling for an average of 6.6 years and had been employed as counselors in their present setting for an average of 5.4 years. The average pupil-counselor ratio was 387:1 with a standard deviation of 239. It had been five years since the average respondent took a course in career information. When asked what emphasis was placed on career information in their graduate program, 32 percent indicated "considerable," 44 percent indicated "some," 19 percent indicated "little," and 4 percent indicated "none."

The counselors were asked to evaluate two types of occupational literature, description and outlook, for three groups of students defined in terms of educational attainment. More specifically, the definitions of the two types of literature and the three groups of students were defined as follows:

> Description information: Concerned with the individual in a job. It consists of a total description of a given job in terms of what must be done, with what tools, in what surroundings, by what kinds of people, and what the rewards for performing such activities are. It also includes the requirements necessary for the individual to successfully obtain a job and information on training and educational opportunities.
>
> Outlook information: Consists primarily of data on the probable future employment opportunities in an occupation. It also includes information on current demands in a given area from which one can project to the future and more general facts about the labor market as a whole (to facilitate understanding of employment trends).
>
> Educational attainment levels:
> 1. Students who terminate their education at high school graduation
> 2. Students planning post-high school vocational or technical training
> 3. Students planning to enter junior college or college

In order to determine if informational sources received similar evaluations in various geographic regions of the United States, the states were divided as shown in Chart 1. In the columns following each state listing is the number of schools contacted (not all the schools were contacted due to omissions on the Office of Education mailing list), followed by the percent of responses from those schools that were contacted. Few regional differences were found.[3]

More than one-fifth of the high school buildings in the Southern Region contained grades K-6 while only 4 percent of the schools in the Western Region contained elementary grades. The average building

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[3]Regional responses may be obtained from the Center.

Chart 1

REGIONAL LISTING AND PERCENT OF RESPONSES BY STATES AND REGIONS

Northeastern United States - Region I

	number contacted	percent responding
Connecticut	114	39
Maine	132	33
Massachusetts	178	51
New Hampshire	60	32
New Jersey	242	45
New York	781 (est.)	43
Pennsylvania	589	44
Rhode Island	33	33
Vermont	61 (est.)	39
TOTAL	2190	40 (average %)

Western United States - Region III

	number contacted	percent responding
Alaska	27	30
Arizona	79	43
California	562	41
Colorado	196	34
Hawaii	31	23
Idaho	93	30
Montana	122	26
Nevada	31	39
New Mexico	95	34
Oregon	193	39
Utah	72	42
Washington	195	45
Wyoming	62	29
TOTAL	1758	35 (average %)

Southern United States - Region II

	number contacted	percent responding
Alabama	501	12
Arkansas	413 (est.)	12
Delaware	41	29
D.C.	13 (est.)	77
Florida	286	30
Georgia	480	14
Kentucky	242	18
Louisiana	472	11
Maryland	125	42
Mississippi	348	70
North Carolina	573	22
Oklahoma	428	17
South Carolina	258	18
Tennessee	347	20
Texas	825	19
Virginia	349	31
West Virginia	140	32
TOTAL	5841	24 (average %)

Mid-Western United States -- Region IV

	number contacted	percent responding
Illinois	554	38
Indiana	404	33
Iowa	442	39
Kansas	335	24
Michigan	522 (est.)	42
Minnesota	437	46
Missouri	306	30
Nebraska	318	26
North Dakota	270	16
Ohio	635	37
South Dakota	197	21
Wisconsin	356	64
TOTAL	4776	35 (average %)

enrollment ranged from a low of 749 in the Midwestern Region to a high of 1,064 in the Northeastern Region. Thus, the type of school organization and the pupil enrollment did vary among regions.

While the differences were not large, it was apparent that the Western Region schools lead in the percent of graduates who enter college or junior college (50 percent), and the other regions have a greater percentage (30 percent) of graduates entering employment directly. The percentages entering apprenticeship training (5 percent), the Armed Forces (8 percent), and vocational training (11 percent) were remarkably consistent among the regions. One cannot help but see the need for high school vocational training when over 25 percent of the graduates in all four regions terminate their education at the high school level.

The average expenditure for occupational literature ranged from a low of $220 per school in the Southern Region to a high of $383 in the Northeastern Region. The average per pupil expenditure per region was: Northeastern--36¢, Southern--25¢, Western--27¢, and Midwestern--40¢.

The counselor responses indicated that the average time spent in counseling ranges from a high of 95 percent in the Northeastern Region to a low of 84 percent in the Western Region. The average pupil-counselor ratio ranged from a high of 511:1 in the Southern Region to a low of 352:1 in the Western Region. Nearly half of the counselors in the Southern Region felt that considerable emphasis was given to vocational information in their counselor preparation programs, while less than one-third of the counselors in the remaining regions felt this way.

ANALYSIS OF SITUATIONAL VARIABLES IN COUNSELORS' RESPONSES:

The discussion of counselors' responses begins with a comparison of the answers of various subgroups within the total sample to the

following six questions:[4]

1. Does the evaluation of occupational information change according to the percentage of students entering different post-high school situations: work directly, vocational school, or college?

This question was asked to see if the counselors' responses differed in accordance with the quartile range of students who would enter each of the three post-high school situations. Inadequacies[5] were noted in five areas of description information (where to get training, related occupations, physical characteristics of those employed, psychological characteristics of those employed, tools or equipment needed) for pupils entering work directly and those entering vocational schools, but in only one area (psychological characteristics of those employed) for pupils entering college. Information inadequacies noted for outlook literature included ten areas (job opportunities in geographical areas, current vacancies in specific occupations, current vacancies in geographical areas, skill requirements of labor force, factors influencing decline or growth of labor force, labor turnover, characteristics of labor force, change in segments of labor force, job stability, job mobility) for pupils entering employment directly and for those entering vocational schools, but only for four areas (job opportunities in geographical areas, current vacancies in specific occupations, current vacancies in geographical areas, job mobility) for those pupils entering college.

The percentage entering the different post-high school situations did not seem to affect the approach used by counselors in presenting information.

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[4]Tabular results are available on request.

[5]When 25 percent or more of the respondents noted an inadequacy.

It did appear, however, that college-bound students seek more information on their own than the other two groups do.

2. Do the recommendations for improving occupational information for the three student groups made by counselors who were dissatisfied with occupational information differ from the recommendations of counselors who appeared satisfied?

The recommendations of counselors who noted informational inadequacies were analyzed separately to see if their recommendations were different. Counselors who were highly critical of occupational information used the same informational sources in the same manner as the less critical counselors. All the counselors suggested improving format and content of occupational literature by more frequent publication, more general information, better writing, and more specific information.

3. Does the evaluation of occupational information differ when it is used most by a particular student group?

This question was asked to see if counselors' responses differed in accordance with the student group which most used occupational information. This question differs from the first question in that the focus is on informational use, not on post-high school behavior.

Counselors' ratings of six areas of occupational publications (accuracy, currentness, sufficiency of detail, extent of coverage, ease in finding what is being sought, clarity) indicated that the student group using the information did not affect counselor evaluations to any extent. In all instances, the information was regarded as slightly better for use with college-bound students.

Two-thirds of all student groups sought information through counseling activities and through reading. Counselors presented information to the

three student groups primarily through group activities, through reading activities, and through publicity activities. An average of 67 percent of the counselors preferred a pamphlet format for presenting occupational information to each student group. More frequent publication (40 percent), more general information (22 percent), and better writing (11 percent) were primary recommendations given for improving content of occupational materials for all three groups. Evaluations of job-description publications and job-outlook publications used by each student group did not vary. The information sources were the same regardless of the student group using them.

4. Do individuals who spend varying percentages of time in counseling differ in their evaluations of occupational information available for the three student groups?

This question was raised in an attempt to ascertain whether full-time counselors (100 percent) and varying degrees of part-time counsllors (01-24 percent, 25-49 percent, 50-74 percent, 75-99 percent) differed in their evaluations and recommendations.

The most marked difference was the greater use of the Occupational Outlook Handbook by full-time or three-quarter-time counselors. Full-time counselors were also more critical of the following job-description aspects: where to get more training, related occupations, physical characteristics of those employed, and psychological characteristics of those employed. They were also more critical of two areas of job-outlook information: current vacancies in geographical areas and change in segments of the labor force.

Full-time counselors were generally more satisfied with the specific aspects of both description and outlook information for all three student groups. They rated best all aspects of information prepared for college-

bound students. Materials prepared for those entering vocational or technical schools were rated next best, while materials prepared for the terminal high school student were rated poorest.

All the counselors, irrespective of the time spent in counseling, indicated the college-bound students seek more information on their own initiative, while the other two groups of students rely more on the counselor to provide information.

Students in schools where counselors spend less than one-quarter time in counseling sought information more through field activities and less through counseling than did those where the percent of time spent in counseling was greater. Surprisingly, however, data indicated that the less time spent in counseling, the less reliance on group activities for presenting information. On the other hand, greater reliance was placed on bulletin boards and assigned reading for information dissemination.

The quarter-time counselor requested more films and used career days to a greater extent than other counselors and placed less emphasis on pamphlets to provide occupational information. Quarter-time counselors were also less desirous than other counselors of more frequent publication as a means of improving content of occupational materials and more desirous of including more general information in occupational materials.

5. <u>Do individuals who have been in counseling positions for a different number of years vary in their evaluations of occupational information available for the three student groups?</u>

This question was raised in an attempt to study the influence of years of experience on counselor evaluation. The four experience groups set up were: 1, 2-4, 5-9, 10 or more years.

Beginning counselors made less use of pamphlets for presenting occupational information with all three student groups. Also, they made slightly less use of the Occupational Outlook Handbook with college-bound students. It was found that these counselors were also more critical of nearly all aspects of description and outlook publications. It appeared that satisfaction with specific aspects of description and outlook information for all three student groups increased with counseling experience.

Occupational materials prepared for college-bound students were rated best by all counselors, regardless of experience. Materials prepared for students entering vocational schools received the next highest rating; materials prepared for terminal high school students were rated poorest.

More students sought information on their own initiative in schools with beginning counselors; more experienced counselors presented information to students. More students sought information through counseling activities as opposed to other types of activities in schools with first-year counselors, while more students sought information through reading activities in schools with experienced counselors. Beginning counselors relied more on individual counseling and bulletin boards to disseminate information and relied less on group procedures than did more experienced counselors.

Two-thirds of all counselors indicated that they prefer a pamphlet format for occupational information. Experienced counselors expressed less desire for career days than beginning counselors. Suggestions for improving the content of occupational materials did not seem to vary with years in counseling; more frequent publication (40 percent), more general information (22 percent), better writing (11 percent), and more specific information (9 percent) were primary suggestions.

6. Do evaluations and recommendations differ according to the pupil-counselor ratio?

This question was asked in an attempt to determine if the number of students with whom a counselor works would exert influence on his response.

It was found that counselors with a lower pupil ratio relied less than the others on the Occupational Outlook Handbook to provide job description information for college-bound students. There was no apparent difference in sources used to provide outlook information.

Pupil-counselor ratio did not appear to be a factor in evaluating either description or outlook information. Psychological characteristics of workers was cited as the most poorly covered aspect of job-description publications by all counselors. All counselors felt that available information is best for college-bound students.

Evaluation of description and outlook information in terms of six criteria (accuracy, currentness, sufficiency of detail, extent of coverage, ease in finding what is being sought, clarity) revealed that satisfaction with specific aspects is unrelated to pupil-counselor ratio. Materials were rated best for college-bound, next best for those planning to enter vocational schools, and poorest for those terminating their education at high school.

The general manner in which occupational information is obtained did not vary much according to pupil-counselor ratio but did vary according to whether or not students are college bound, i.e., students who are college-bound used information to a greater extent by themselves, while the other two groups relied more on the counselor in their use of occupational information.

The approaches students used to obtain information were unaffected by

pupil-counselor ratio. Nearly half of the counselors mentioned that students use reading activities to seek information; an average of 21 percent mentioned counseling activities as a method used by students. Methods used by counselors to present information were also unaffected by pupil-counselor ratio. Counseling activities, publicity activities, and group activities were the three most frequently mentioned methods.

It did appear that counselors with a smaller ratio preferred more films and fewer pamphlets than did counselors with larger ratios. More frequent publication as a means of improving the content of occupational information was suggested by 39 percent of all the counselors.

It has been shown that the evaluations and recommendations of school librarians, vocational instructors, and school counselors hold true for all regions of the United States. Further analysis has shown counselors' responses are unaffected by the destination of the students who graduate from the schools in which the counselors work. The recommendations for improving information sources were similar for counselors who are generally satisfied with the literature and for highly critical counselors. It also appeared that whether or not a particular student group uses information materials most does not affect counselor evaluations. Furthermore, the amount of time spent in counseling and the pupil-counselor ratio did not significantly affect counselor evaluations. Therefore, the results which follow are largely unaffected by the above considerations.

COUNSELORS' EVALUATION OF INFORMATION RESOURCES:

The following tables present the counselors' responses to the questionnaire. Responses to similar questions about description and outlook information are contained within the same table. Separate tables are used to

present data regarding informational sources and evaluations of specific aspects of description and outlook information.

Table 1

COUNSELOR RESPONSE TO WHETHER OR NOT INFORMATION IS PREPARED FOR THOSE WHO NEED IT

	Description	Outlook
Yes	67%	65%
No	33%	35%

Two-thirds of the counselors felt occupational information is prepared for those needing it most. In Table 2 it can be seen that the counselors felt those students continuing their education beyond high school have the most information available to them. However, one-third of the counselors

Table 2

THE STUDENT GROUP TOWARD WHICH MOST OF THE LITERATURE IS DIRECTED

	Description	Outlook
High school or less	23%	20%
Vocational, technical, or trade	29%	37%
College and professional	48%	43%

who felt information was not available for those needing it most (Table 3) indicated the terminal high school student has the greatest unmet need, followed by the student going on to a noncollege program. The college-

Table 3

STUDENT GROUPS NEEDING MORE INFORMATION

	Description	Outlook
High school or less	48%	60%
Vocational, technical, or trade	36%	22%
Both of the above	14%	15%
College and professional	2%	3%

bound student makes twice as much use of information as the other two groups (Table 4). It can be suggested from the data in these tables that counselors are generally satisfied with the available information if they

Table 4

STUDENT GROUPS WHICH MAKE THE MOST USE OF INFORMATION

	Description	Outlook
High school or less	23%	18%
Vocational, technical, or trade	24%	30%
College and professional	53%	52%

feel college-bound students have the greatest information need, while counselors who feel terminal high school students have the greatest need are generally dissatisfied.

Table 5

SOURCES OF OCCUPATIONAL DESCRIPTION INFORMATION USED BY 3,555 COUNSELORS

	H.S.	VOC-TECH	COLLEGE
Occupational Outlook Handbook	37%	36%	28%
Briefs and pamphlets	24%	23%	24%
Information kits	14%	13%	13%
Dictionary of Occupational Titles	7%	6%	5%
General books	6%	5%	3%
Educational or training institutions' bulletins	-	3%	10%
Private publisher publications (directed toward educational information)	1%	6%	12%
Other	11%	8%	5%

The Occupational Outlook Handbook (OOH) was the primary description and outlook information source for all three student groups. When it is remembered that the OOH provides a very brief description of the occupation

Table 6

SOURCES OF OCCUPATIONAL OUTLOOK INFORMATION USED BY 3,555 COUNSELORS

	H.S.	VOC-TECH	COLLEGE
Occupational Outlook Handbook	58%	58%	52%
Briefs and pamphlets	14%	13%	14%
Information kits	5%	5%	6%
Dictionary of Occupational Titles	3%	2%	-
General books	3%	3%	3%
Educational or training institutions' bulletins	-	2%	6%
Private publisher publications (directed toward educational information)	1%	2%	5%
State Employment Service publications	5%	4%	2%
Occupational Outlook Quarterly	3%	3%	-
Other	8%	8%	12%

and those employed in it, a question can be raised as to the quality of description information provided students by this source. Pamphlets were used by about one-fourth of the counselors as a description information source, and pamphlets were the secondary source of outlook information. The sources which were categorized as "other" included written materials only. Thus the printed word was the only format used to communicate occupational information other than some film strips available through private publishers.

The shortcomings of description literature were similar for all three student groups with the exception that less was known about training locations for the terminal high school student and the prospective vocational-technical school student. As can be seen from Table 7, the more obvious aspects of work (job duties, working conditions, earnings, and entry requirements) were

Table 7

ASPECTS OF DESCRIPTION INFORMATION INADEQUATELY COVERED FOR EACH STUDENT GROUP

	H.S.	VOC-TECH	COLLEGE
Duties of employees	16%	12%	11%
Working conditions	20%	16%	14%
Earnings and advancement	17%	15%	11%
Entry requirements	12%	11%	7%
Training locations	37%	36%	23%
Physcial characteristics	29%	28%	25%
Psychological characteristics	45%	46%	41%
Related occupations	31%	31%	25%

seen as adequately covered. The less obvious, and therefore those about which more needs to be known, were less adequately covered. These latter aspects have been receiving the attention of the U.S. Department of Labor, but apparently counselors have not found a resource which helps communicate this information to secondary school pupils in a suitable manner.

A comparison of Tables 7 and 8 shows almost all aspects of outlook information are less adequately covered than aspects of description information. In both tables the various information inadequacies are seen as less of a problem for the college-bound student. This finding may reflect less concern for job placement and more concern with college placement among these students. It is difficult to single out one or two aspects of outlook information which particularly need attention. The observation that nearly two-thirds of the outlook information comes from the Occupational Outlook Handbook (Table 6), may indicate a need to develop sources to supplement this informational source.

Table 8

ASPECTS OF OUTLOOK INFORMATION INADEQUATELY COVERED FOR EACH STUDENT GROUP

	H.S.	VOC-TECH	COLLEGE
Projected job opportunities in specific occupations	23%	15%	12%
Projected job opportunities in specific geographical areas	42%	40%	34%
Current vacancies in specific occupations	39%	36%	30%
Current vacanices in specific geographical areas	45%	44%	38%
Estimated future skill requirements of the American labor force as a whole	25%	24%	19%
Main factors influencing the growth or decline of particular occupations	29%	29%	24%
Facts about employment and unemployment levels and trends	23%	21%	18%
Labor turnover	30%	27%	21%
Characteristics of the labor force	23%	20%	15%
Change in the use of various segments of the labor force	26%	24%	18%
Job stability	27%	24%	17%
Mobility in the occupational area	36%	34%	27%

Because the criticisms of both description and outlook sources were similar, they have been combined in Table 9. The major criticisms were that not enough aspects of a job were covered and those aspects which were covered lacked detail. Of course, having current information and being able to locate it are both major problems which may be due more to the limitations of time and space available to the counselor than to inade-

Table 9

DIMENSIONS OF BOTH DESCRIPTION AND OUTLOOK INFORMATION WHICH ARE INADEQUATE

	H.S.	VOC-TECH	COLLEGE
Accuracy	33%	28%	22%
Currentness	43%	40%	35%
Sufficiency of detail	51%	47%	41%
Extent of coverage	51%	47%	41%
Ease in finding what is being sought	37%	34%	29%
Clarity	37%	32%	27%

quacies in the information itself. Lack of clarity is interpreted to mean that the materials are not presented in a manner which students can understand. Counselors found many shortcomings in the information sources they use.

One of the questions attempted to find out how occupational information was used by students and counselors, i.e., did the student or the counselor introduce the need for information. It was found that among terminal high school students and those going to vocational-technical school, the students asked for information about 40% of the time, while college-bound students sought information 54% of the time.

It is apparent from Table 10 that students did not rely to any great extent on the counselor as a source for either type information. In fact, most of the time students either obtained information as part of an assignment, usually in ninth grade, or else read something of interest in a particular field. The students relied very little on first hand contact (field activities which include interviewing workers) but rather were described as depending on the school to make information available.

Table 10

PRINCIPAL APPROACHES STUDENTS USE IN SEEKING DESCRIPTION AND OUTLOOK INFORMATION

	Description	Outlook
Reading activities (assigned and self-referred)	48%	41%
Individual counseling	21%	20%
Field activities (visits and adult interviews)	8%	6%
Bulletin boards, announcements	6%	5%
Career days	1%	-
Group activities (class units, group guidance)	6%	5%
Miscellaneous	10%	12%
None mentioned	0	11%

Career days played a small part in either information acquisition by students or information presentation by counselors (Table 11).

Counselors relied heavily on group activities, bulletin boards, and individual counseling as methods of presenting information. Again, the information was presented largely through printed materials, and very little use was made of resource people outside the school. The group activities which counselors used were usually not formal classes which met regularly but rather periodic information-giving meetings.

Various government agencies, but particularly the U.S. Department of Labor, were the chief sources of occupational materials. Looking back at Tables 5 and 6 one can see that one publication, the Occupational Outlook Handbook, is the information source in schools. Private publishers were just about tied with government agencies as a source of description information and were a little less prominent as a source of outlook information. The prominence of the Occupational Outlook Handbook might

Table 11

PRIMARY APPROACHES COUNSELORS USE IN PRESENTING INFORMATION

	Description	Outlook
Reading activities	5%	5%
Individual counseling	18%	20%
Field activities	2%	1%
Group activities	31%	27%
Written activities	3%	2%
Publicity	23%	18%
Career days and college nights	2%	3%
Films and filmstrips	4%	3%
Lectures	2%	2%
Test interpretations	3%	2%
Miscellaneous	6%	6%
None mentioned	1%	11%

Table 12

MEAN RANK ORDER OF OCCUPATIONAL SOURCES

	Description	Outlook
Government agencies	1.98	1.51
Private publishers	2.03	2.46
Professional and industrial societies	2.95	3.04
People in the occupation or industry of interest to the pupil	4.39	4.25
Trade associations and labor unions	4.46	4.25
Periodicals not specifically designed to relate occupational information	5.04	4.78
Newspapers	5.47	4.92

be explained by its format, but the high preference counselors gave to pamphlets (Table 13) weakens this explanation.

Table 13

FORMAT PREFERRED BY COUNSELORS

	Description	Outlook
Pamphlets	68%	61%
Films and other audio-visual	10%	10%
Books	8%	14%
Career days, field days, group presentations	6%	5%
Varied forms	6%	6%
Loose-leaf notebook	1%	1%
Other	1%	3%

Table 14

REASONS COUNSELORS PREFER PARTICULAR FORMATS

	Descriptions	Outlook
Convenient (can be given to students, easy storage)	39%	32%
More effective (attracts more students, reaches poor readers, first-hand information)	17%	12%
Easy to read (concise, condensed, good for poor readers)	7%	5%
Cheap	4%	3%
Current	4%	7%
Good on details (tells where to obtain more information)	3%	3%
Replaceable	1%	1%
Accepted by students	1%	-
No comment	24%	37%

Table 13 provides data regarding in what format counselors would like to have information available, and Table 14 shows the reasons for their preferences. Because the majority of counselors preferred pamphlets, the reasons given in Table 14 are essentially reasons why a pamphlet is preferred. Over half the counselors who gave a reason for preferring pamphlets noted their convenience. This preference probably underscores the major difficulty secondary school counselors face in providing an information service-storage and organization.

Table 15

SUGGESTIONS BY COUNSELORS FOR IMPROVING INFORMATION

	Description	Outlook
More frequent publications	36%	32%
More general information (occupational interrelationships, more on industry)	19%	17%
More specific information (physical and psychological information, local job information, more on least enjoyable job characteristics)	8%	7%
Better writing (few lists of statistics, more wit, common language, accurate)	11%	9%
More visual aids (graphs, pictures, larger print)	4%	5%
Available at different reading levels	1%	-
More summary	1%	1%
Other	11%	10%
No response	9%	19%

Summary and Conclusions

An important finding is that less than half--42 percent--of the high school graduates enter college or junior college. The remainder enter work or a work preparatory program right out of high school. These student groups must make definite vocational decisions sometime in their senior year. Accurate and comprehensive information are essential ingredients of intelligent vocational decision-making by these students. Yet, counselors cited this group as the one for which available information is poorest. Moreover, 44 percent of the boys and 30 percent of the girls never sought any information, according to the responding school librarians. The vocational instructors also noted a small percentage seeking information from them. Thus, vocational information must be made available in a form which will attract as well as inform students. It is doubtful that limited school budgets will allow for innovative approaches on the local level, indicating that something must be done on a national level by government or by private publishers.

The mode most used in obtaining information was through reading, even though repeated studies show this method to be the least comprehensive approach to learning. Counselors did not rely solely on reading activities to disseminate information, but apparently a written handout accompanied most counseling and group presentations; otherwise the suggestion that pamphlets are the best format for disseminating information seems inconsistent.

Turning to specific aspects of description information which were judged inadequate, over one-third of the respondents focused on training opportunities, related occupations (job clusters), and psychological characteristics of those employed. Of the 15 aspects which were included

on the questionnaire, these three are the most basic to any vocational decision-making. It would seem reasonable to conclude that counselors find the most important aspects of description information inadequate.

The last two findings, heavy reliance on reading activities and the three description aspects which are most inadequate, point to the areas which need immediate attention. New modes of disseminating information must be developed and better information must be devised. It would appear that private publishers should focus more attention on developing multi-media approaches because the government probably will not be able to involve itself in this aspect. However, more accurate and thorough information requires major data-gathering activities for which the government can more easily assume responsibility.

A possible conclusion is that counselors make reading materials available to students and hope the materials contain valid data and that the students can glean from these sources relevant information for their personal use. The orgnaization, updating, and individualizing of these materials is a formidable job for the individual counselor; as a group they do not seem to be aware of a way of increasing their effectiveness if they merely suggest that more frequent publication of information in pamphlet form is the answer to their difficulties.

The picture for outlook information is even dimmer. Most of the categories were checked as inadequately covered by nearly a third or more of the counselors. They were particularly critical of sufficiency of detail and extent of coverage. That is, not enough occupations are covered and those that are covered lack depth of coverage. By and large, the Occupational Outlook Handbook is the one source for outlook information.

The investigator has the impression that all together thousands of hours are spent by individual counselors to establish and maintain local information systems. A better approach would be to establish state or regional information centers where all schools would have rapid and inexpensive access to current information. Furthermore, greater attention should be given to making information available using a job cluster format (new version of the Dictionary of Occupational Titles), with the basic elements of work depicted in films of filmstrips.

The problems facing producers of outlook information are even more complex. First of all, high school students do not usually raise relevant questions about their future work. Therefore, ways to interest the student in his future have to be discovered. Moreover, the large number of intervening variables which affect jobs are largely unpredictable because they are affected by technical, political, and economic factors which in themselves are unpredictable. In a society where a person begins preparing years in advance for entry into an occupation, accurate outlook forecasts are a necessity. Even though these forecasts are difficult, the combined efforts of economic, political, and industrial experts could increase the accuracy of outlook predictions.